Mecklenburg County Air Quality

PERMIT APPLICATION REVIEW SUMMARY

Title V

Section A: FACILITY INFORMATION		Existing	X	New	
Company Name (Legal Corporate Name)	Charlotte Pipe & Foundry Company				
Site Name (If Different From Above)					
Site Address (Street, City, Zip Code)	1335 S. Clarkson St., Charlotte, NC 28208				
General Description of Business	Gray Iron Foundry				
Facility AQ Classification(s)	Title V	**Site Consistent w/ Zoning? (Y/N)**	Y		

Section B: APPLICATION INFORMATION		Modified		New	
Date of Application	5/25/2018	**Application Tracking Number**	2018-AQ-49295		
Date Complete Application Received	5/25/2018	**AQC Date/Public Comment Opens**	Online publication and newspaper		
Confidentiality Requested?	No	**AQC Agenda Type:** Notice, Alternate, FYI	Notice		
Application Results: Brief description of actions requested by application and/or taken by MCAQ.	5-year renewal of Title V Permit				
Permit Issued as a Result of Application – Number:	**19-01V-626**				
Permit Voided as a Result of Application – Number:	14-03V-626, 17-01C-626, 18-03C-626				

Section C: REGULATORY INFORMATION						
MCAPCO Regulations Applicable: List only specific conditions and/or regulations cited in permit issued. Indicate subpart for regulations 2.0524, 2.1110 & 2.1111.	1.5110, 1.5113, 1.5236, 1.5500, 1.5701/2.1104, 2.0512, 2.0515, 2.0516, 2.0535 2.0928, 2.0958, 2.0967, 2.1111 (Subparts CCCCCC, ZZZZZ, ZZZZ)					
Miscellaneous Applicability (Y/N)	N	**112r (40CFR68)**	Y	**Strat. Ozone (40CFR82)**	Y	**CAM (40CFR64)**
HAPs >10tpy, Potential Emissions: facility-wide	NA – Synthetic Minor Limitation					
TAPs Modeled: this application	Benzene					

Section D: FACILITY- WIDE EMISSIONS INFORMATION

AIR POLLUTANTS	Calculated Actual Emissions With Control (tons/year)				
	Existing	**New**	**Total**	**# Change + / (-)**	**% Change + / (-)**
Particulate Matter < 10 microns - PM-10	101.12	0	101.12	0	0
Particulate Matter < 2.5 microns – PM2.5					
Sulfur Dioxide - SO_2	13.20	0	13.20	0	0
Nitrogen Oxides - NO_x	31.97	0	31.97	0	0
Carbon Monoxide - CO	9.42	0	9.42	0	0
Volatile Organic Compounds - VOC	56.76	0	56.76	0	0
All Hazardous Air Pollutants - HAPs	7.21	0	7.21	0	0
Greenhouse Gas Pollutants – CO_2e					

AQ Specialist Signature: Donna Cavaliere **Date Completed:** 12/04/2018 Revised 02/05/2019

Supervisor Signature: Jason Rayfield **Date Approved:** 02/06/2019

SECTION A DETAILS

FACILITY INFORMATION

Detailed discussion of any items in Section A. At a minimum provide the following information:
1. Basis for permit: reason facility/source is "major" under Title V and submitting a Title V application
2. description of business operation (more detailed than summary page)

Basis for Permit:

This is a renewal of the Title V Permit for Charlotte Pipe and Foundry Company, Inc.

Charlotte Pipe is a major source under Title V because potential emissions of PM_{10}, CO, VOC, SO_2, NOx, and HAP exceed the major source thresholds.

The facility has accepted federally-enforceable limits on NOx and HAP emissions to remain classified as a synthetic minor source for those pollutants.

The facility also has several previously established PSD/NSR avoidance limits. These limits will be carried over to the new permit.

The facility is subject to several Area Source MACTs including Subpart ZZZZZ – NESHAP for Iron and Steel Foundries, Subpart CCCCCC – NESHAP for Gasoline Dispensing Facilities, and Subpart ZZZZ NESHAP for RICE engines.

Business Operation:

Charlotte Pipe operates a gray iron foundry which produces cast iron pipe and fittings from scrap metal. Cores are produced as a support operation to pouring and casting and are used to define the internal features of castings.

Foundry Processes:

1) Raw Material Handling (FS-01):

Raw materials used at the facility include metallics (cast iron, steel, silica carbide and pig iron), fuel (coke), fluxes (limestone), alloys (ferrosilicon) and core sand. Emissions from FS-01 include particulates and metal HAPs.

2) Cupola Operations (ES-01):

The cupola is a 128-inch diameter, vertical furnace that uses coke for fuel. The cylindrical shell has a refractory-lined inner wall and a water-cooled outer wall. Taps at the bottom of the cupola are used to continuously remove molten metal and slag. The molten metal is poured into one of three holding furnaces to be stored for use in the pouring and casting areas. Emissions from ES-01 include criteria pollutants and metal HAPs.

3) Permanent Mold Pipe Production (ES-02):

Permanent mold pipe production includes Multi-Flasks, SPK and Four Flask processes. Pipes produced by these processes are centrifugally cast using permanent molds. Molten metal is poured into a steel mold which uses centrifugal motion to ensure even casting. Emissions from ES-02 include criteria pollutants, HAPs and TAPs.

4) Fitting Operations (ES-03):

The fitting operations include Disas, Cope & Drag, HWS and FBO machines. Fitting production steps include sand molding, pouring and cooling, shakeout and sand handling. A wide variety of shapes are formed using sand molds that define the outer surface of the fitting, and cores that define the inner surface of the fitting. Emissions from ES-03 include criteria pollutants, HAPs and TAPs.

5) Shell Core Machines (ES-04):

This process includes small core room production (U-180s Blowers and U-360s machines) and large core room production (R&J Core Blowers and U-180s machines). Emissions from ES-04 include criteria pollutants, HAPs and TAPs.

6) Laempe Processes (ES-05):

There are three Laempe Machines. Machine 2 produces hub cores for Rolocast pipes and machines 1 and 3 produce cores for fitting operations. Emissions from the Laempe processes include particulates, VOC, HAPs and TAPs.

7) Rolocast (ES-06):
Rolocast pipe production uses sand molds to produce five foot pipes. The main steps include pouring and cooling, shakeout and sand handling. Emissions from ES-06 include criteria pollutants, HAPs and TAPs.

8) Air Set Core Making Process (ES-07):
This process produces sand cores for large fitting production (Cope & Drag and HWS processes). Emissions from Air Set Core Making include particulates, VOC, HAPs and TAPs.

9) Finishing Operations (ES-08):
Finishing operations include shot blasting, grinding, coating, painting, and labeling. Once grinding and shot blast cleaning is complete, the fittings and pipes will pass through one of the coating or painting processes including the E-Coat process, hot-dip asphalt, and/or labeling/painting. Emissions from ES-08 include particulates, VOC, HAPs, and TAPs.

10) Workshop (ES-09):
The wood-pattern and woodworking workshop is used to make hand-carved master patterns. This source includes woodworking equipment, two storage silos, and grinders. Emissions from ES-09 include particulates.

11) Gasoline Storage Tanks (ES-10):
Gasoline is stored in a 10,000 gallon above-ground storage tank equipped with submerged fill pipe and Stage I vapor recovery. Emissions from ES-10 include VOC, HAPs, and TAPs.

Changes Made Since the Last Renewal:
The following changes have been made since issuance of the last renewal permit –
Permit No. 14-01V-626 issued June 9, 2014 – 5 year renewal.

Changes since June 2014:

2014 Construction Permit No. **14-02C-626** – Replace CD-08b baghouse with 3 new baghouses.
2015 Off-Permit Change – install 2.0 mmBtu/hr Natural Gas Pre-heat Oven
2015 Construction Permit No. **15-01C-626** – Replace FBO (Like-for-like replacement)
2016 Re-issue Title V Permit – New Permit No. **14-02V-626 issued 11/23/2016,** included: Replace shot blast cleaner, revise state Air Toxics modeling demonstration, incorporate previous construction permits, update MCAQ address. Construction Permits 14-02C-626 and 15-01C-626 and the off-permit change were incorporated here.

2017 Off-Permit Change - Remove Voeller CM-650 Sludge Mixer and add insignificant MXD High Shear Mixer with bin vent filter ** *See note below. This change was not made.*
2017 Off-Permit Change - Remove two 30,000 gallon Propane Tanks
2017 Re-issue Title V Permit – New Permit No. **14-03V-626 issued 10/31/2017,** included: Replace Herman Molding Machine with new HWS Molding Machine, install new baghouse on HWS fitting line (CD-03i), add control to Cope & Drag pouring and cooling operations. One off-permit change was incorporated here.

2017 - 2018 Construction Permit No. **17-01C-626** – Add Odor Maximum Feasible Control requirements (issued November 2017, revised and reissued March 2018).
2018 Construction Permit No. **18-03C-626** – Replace Laempe #2.
2018 Off-Permit Change – Install 3.0 mmBtu/hr Natural Gas Core Oven.
These changes will be incorporated into the new Title V Permit No. 19-01V-626.

*** The requested off-permit change from 2017 was never completed. In a telephone conversation with Ms. Jenny Pappalardo of Charlotte Pipe on December 19, 2018, she informed MCAQ that the Voeller mixer is still on site, and they will not be replacing it with the MXD mixer. If they plan to make this change in the future, a new Off-Permit change notification letter will be submitted.*

SECTION B DETAILS

APPLICATION INFORMATION

[List all emission sources (permitted and exempt) reviewed as a result of this application, their associated control devices and pollutants. Provide a detailed discussion of any other items in Section B at bottom under "Application Notes"]

EMISSION SOURCE ID	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE DESCRIPTION and ID	MISCELLANEOUS NOTES	Previous Permit No.
FS-01	**Raw material handling** - consisting of - rail car and truck unloading areas for raw materials (i.e. scrap metal/pig iron, coke, sand, & fluxes - limestone and ferrosilicon), - open-top silos and vibrating conveyors to store and deliver coke and fluxes to the cupola, and a - magnetic crane to deliver the scrap metal/pig iron to the cupola.	**CD-f 01**: One (1) CAMCORP 4SFTR 45x30 **bin vent** filter. **CD-f 03**: Industrial Ventilation Inc. Model TA8x9 **fabric filter** (baghouse) to control particulate emissions from the railcar unloading process.		14-03V-626
ES-01	**An iron melting and holding process** consisting of - one (1) 128 - inch diameter, 70 ton/hr capacity **cupola,** - three (3) holding furnaces.	**CD-01a:** one (1) North American/ Modern Equipment Model No. NA 4545-9 and one (1) Hauck Model BBG-2108 **afterburner** to reduce CO, operated in series with **CD-01b:** GMD Environmental Systems, Inc. Model No. 240-12-6WI **fabric filter** (baghouse).		14-03V-626
ES-02	**Permanent Mold Production Processes** to include: - three (3) Multi-Flask machines each with a holding furnace; - two (2) Four-Flask machines; - two (2) SPK machines; - one (1) Double-Barrel-5 ft SPK machine; - one (1) 2-barrel SPK machine; all used to centrifugally cast iron pipe	**CD-02a:** Alanco Environmental model 8BD54 **cartridge filter** to control particulate emissions from the feldspar/bentonite mixing/handling.		14-03V-626
ES-03	**Fittings Production** (New Plant Fittings (NPF)) consisting of various pieces of` equipment to mold sand, pour molten metal, remove sand from the casting (shake-out) and sand handling. Two (2) **231-B Disas** (#1 & #2) consisting of: - (1) sand muller, - (1) sand cooler, - (1) sand hopper, - (2) molding units, - (2) metal pouring units, - (2) cooling units, - (2) sand shakeout units, and sand screening, One (1) **sand muller** servicing the HWS, FBO, and Cope & Drag machines. **HWS molding machine** including: - (2) metal pouring units, - (3) cooling units, - (1) sand shakeout unit, - (1) sand screening unit. **Sinto FBO machine** - (1) metal pouring unit - (1) cooling unit - (1) shakeout unit, sand screening	**CD-03a:** One (1) Wheelabrator model 74-16 TA-SB 120 **baghouse** to control particulate emissions from the Disas. **CD-03b:** One (1) Wheelabrator model 62-15 TA-SB 144 **baghouse** to control particulate emissions from the Cope & Drag pouring and cooling, Cope & Drag degating, Cope & Drag and FBO Shakeout, and Cope & Drag, FBO and HWS sand handling **CD-03c**: One (1) Flex-Kleen model 120 WPWC-405111 **baghouse** to control particulate emissions and allow the addition of cooler air for the fitting cooling conveyors **CD-03f:** One (1) Industrial Ventilation Inc. model TA 15x15x10 pulse jet **baghouse** to control particulate emissions from Disa degating and shotblasting. **CD-03g:** One (1) Industrial Ventilation Inc. model TA 15x15x12 pulse jet **baghouse** to control particulate emissions from FBO and HWS degating and Cope & Drag, FBO, and HWS shotblasting. **CD-03h**: One (1) Camcorp model 12TR41x176-60P **baghouse** to control	A modification date (M=2018) was added to CD-03h under Permit 18-03C-626. Emissions from grinding in the finishing department were re-routed to this baghouse as part of that permitting action.	14-03V-626

EMISSION SOURCE ID	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE DESCRIPTION and ID	MISCELLANEOUS NOTES	Previous Permit No.
ES-03 **Continued**	**Cope & Drag machine** - (1) metal pouring unit - (1) cooling unit - (1) shakeout unit, sand screening	particulate emissions associated with fitting grinding operations from Disas, HWS, FBO, and Cope & Drag. **CD-03i**: One (1) IVI model PA 15x40x144 **baghouse** to control particulate emissions from HWS pouring and cooling, and shakeout.		
ES-04	**Shell Core production** consisting of: Large Core Room - (15) R&J core blowers - (24) Shalco U-180s Small Core Room - (12) B&P - (3) Shalco U-180s - (4) Shalco U-360s	None		14-03V-626
ES-05	**A pipe/fitting core manufacturing process** (three (3) Laempe machines) using phenolic urethane amine and sand. Sand cores are used as an interior mold when casting pipe fittings and pipe mold hubs	**CD-05a:** One (1) Dakota Environmental Systems model DI-42 countercurrent **scrubber** with a sulfuric acid scrubbing solution to control amine, VOC, and formaldehyde emissions from Laempe machine #2. **CD-05d**: One (1) Dakota Environmental Systems model DES-68 countercurrent **scrubber** with a sulfuric acid scrubbing solution to control amine, VOC, and formaldehyde emissions from Laempe #1 & #3 machines	Laempe #2 was replaced in Construction Permit 18-03C-626. CD-05a was also replaced with a newer model.	14-03V-626
ES-06	A **pipe manufacturing process** using five (5) Rolocast Pipe machines that allow molten metal to be poured and cast into pipe using sand molds.	**CD-06a**: One (1) Amorex Rex Pulse RP-10-588 **baghouse** to control particulate emissions. **CD-06b**: One (1) GMD Environmental Systems Model 750-10-6WI **baghouse** to control particulate emissions.	A modification date was added to CD-06a under Permit 18-03C-626. Emissions from the silica silo (IA) were re-routed to this baghouse as part of that permitting action.	14-03V-626
ES-07	**Air Set Core Making** process to produce sand cores for large fitting production.	None		14-03V-626
ES-08	**Finishing Operations** for fittings and pipe including: - Shot blast stations, - Grinding stations, - Water-based asphalt coating, - Hot-dip asphalt coating (coating tanks 1-6), - E-coat coating, - Inkjet labeling, and - Painting stations.	**CD-08c1&2:** Two (2) CECO Filters, Inc. **fume collectors** to control particulate emissions from the hot-dip asphalt coating tanks #2 (#3 Multi Flask) and #3 (#1 Multi-Flask). **CD-08d:** One (1) Dura-Life **baghouse** to control particulate emissions from #2 Multi-Flask grinding operations. **CD-08e**: One (1) CECO Filters, Inc. model FIV-15300-C-O-LF **fume collector** to control particulate emissions from hot-dip asphalt coating tank #1 (#2 Multi-Flask) and 15,000 gallon asphalt storage tank. **CD-08g:** One (1) Industrial Ventilation Inc. model 08FB17-2 **fume collector** to control particulate emissions from hot-dip asphalt coating tank #6 (#1 and #2 Four-Flask). **CD-08h1&2:** Two (2) CECO Filters,	With Construction Permit 18-03C-626, grinding operations were rerouted to existing baghouse CD-03h. CD-08i will no longer be used and was removed from the permit.	14-03V-626

EMISSION SOURCE ID	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE DESCRIPTION and ID	MISCELLANEOUS NOTES	Previous Permit No.
ES-08 **Continued**		Inc. model FIV-15300-C-O-LF' **fume collectors** to control particulate emissions from hot-dip asphalt coating tanks #4 (#5 SPK and 2-barrel SPK) and #5 (#3 SPK and #1 Double-Barrel 5-ft SPK). **CD-08n:** One (1) CECO Filters, Inc. model FIV-15000-GS-F **fume collector.** Backup fume collector to be used in the event that one of the other fume collectors is taken down for repair or maintenance. **CD-08o*** - Pulse Jet Baghouse for control of particulate emissions from #1 and #3 Multiflask grinding operations; **CD-08p*** - Pulse Jet Baghouse for control of particulate emissions from the Rolocast shot blasting operation; and, **CD-08q*** - Pulse Jet Baghouse for control of particulate emissions from the Rolocast grinding operation. **CD-03f:** One (1) Industrial Ventilation Inc. model TA 15x15x10 pulse jet **baghouse** to control particulate emissions from Disa degating and shotblasting **CD-03g:** One (1) Industrial Ventilation Inc. model TA 15x15x12 pulse jet **baghouse** to control particulate emissions from HWS and FBO degating and HWS, Cope & Drag, and FBO shotblasting. **CD-03h*:** One (1) Camcorp model 12TR41x176-60P **baghouse** to control particulate emissions associated with fitting grinding operations from Disas, HWS, FBO, and Cope & Drag. ** baghouses exhaust inside the building.*		
ES-09	**Miscellaneous Operations** including: - woodworking/wood-pattern making workshop, - two (2) storage silos, and, - Gundrill grinding room.	**CD-09a:** Amano WRT-5096 **bagfilter** to control particulate emissions from the wood-pattern shop **CD-09b:** Air System, Inc. **cartridge filter** model 36-1M-6 to collect particulate emissions from the silos **CD-09c: Drum filter** to control particulate emissions from grinding room.		14-03V-626
ES-10	One (1) 10,000 gallon above ground Gasoline **storage tank** and dispensing facility.	Submerged fill pipe and Stage I Vapor Recovery		14-03V-626
IA	**Pipe Manufacturing and Finishing Combustion Sources** including: - Two (2) 4 mmBtu/hr natural gas fired E-Coat ovens. - Three (3) 1.5 mmBtu/hr natural gas fired pipe mold pre-heat ovens. - One (1) 3.75 mmBtu/hr natural gas fired hot water heater	None		14-03V-626

EMISSION SOURCE ID	EMISSION SOURCE DESCRIPTION	CONTROL DEVICE DESCRIPTION and ID	MISCELLANEOUS NOTES	Previous Permit No.
	– One (1) 2.0 mmBtu/hr natural gas-fired pipe mold pre-heat oven			
IA	One (1) 2400 kW **emergency generator** fueled by #2 diesel fuel at a rate not to exceed 114.2 gallons/hr and operating less than 500 hrs/yr	None		14-03V-626
IA	One (1) 100 kW **emergency generator** fueled by #2 diesel fuel at a rate not to exceed 8 gallons/hr and operating less than 500 hrs/yr	None		14-03V-626
IA	One (1) 15,000 gallon liquid asphalt **storage tank** (hot dip)	Vented to **fume collector CD-08e** or **CD-08n**		14-03V-626
IA	**Fabrication and Machine Shops**			14-03V-626
IA	10,000 gallon aboveground **Storage Tank** (diesel fuel)	None		14-03V-626
IA	**Wastewater Treatment** Equipment	None		14-03V-626
IA	One (1) Voeller CM-650 **mixer** for use in the mixing of sludge from the treatment plant One (1) storage **silo** containing silica One (1) storage **silo** for feldspar and a feldspar coating handling/ production operation.	**CD-06a**: One (1) Amorex Rex Pulse RP-10-588 **baghouse** to control particulate emissions from the silica silo. Bin vent filter to collect particulate from the feldspar silo.		14-03V-626
IA	**Custom Casting finishing process** consisting of shotblasting and grinding units exhausting inside the building through three **particulate filters*** ** process has no emissions to the atmosphere*	None		14-03V-626
IA	**Aluminum Casting Shop**	None		14-03V-626
IA	Various **space heaters** used for comfort heat	None		14-03V-626
IA	**Grinding operations** associated with SPK 1, 3, 5 and Four-Flask 1, 2 with particulate emissions exhausting inside the building through two **particulate filters*** ** process has no emissions to the atmosphere*	None		14-03V-626
IA	One (1) 3.0 mmBtu/hr natural gas-fired **Core Oven** – I=2019	None	See December 26, 2018 Off-permit Change letter	NA (off-permit change)

Note: In accordance with MCAPCO 1.5508(x), regulated fugitive emissions (from any of the 27 categories) as defined in 40 CFR 70.2 or for HAP emission purposes, shall be included in the same manner as stack emissions. All regulated fugitive emission sources may be grouped and listed as one (1) emission source under Emission Source ID No.

Odor Control Systems - Construction Permit 17-01C-626:

Emission Source ID	Emission Source Odor Control System Description	MISCELLANEOUS NOTES
ES-01	Iron Melting and Holding Process Cupola Thermal Oxidation including Pilot Burner and Main Afterburners	A maximum feasible control plan for odorous emissions was submitted by the facility. Following review and approval of that plan, Construction Permit No. 17-01C-626 was issued to incorporate the odor control systems. The facility is required to operate and maintain these
ES-03 SD-03a SD-03b SD-03i AD-03a AD-03b	Fittings Production Disa Stack Deodorizer NPF Stack Deodorizer HWS Stack Deodorizer Disa Area Deodorizer Fan System NPF Area Deodorizer Fan System	

Emission Source ID	Emission Source Odor Control System Description	MISCELLANEOUS NOTES
ES-04 SD-04b SD-04a AD-04b AD-04a	Shell Core Production Large Shell Core Room Stack Deodorizer Small Shell Core Room Stack Deodorizer Large Shell Core Building Exhaust Fan Deodorizer System Small Shell Core Building Exhaust Fan Deodorizer System	systems to minimize odors. Status reports are requested by MCAQ when odor complaints are received. This information will be added to the Local Only section of the Title V Renewal Permit (Section E).
ES-06 SD-06 AD-06	Pipe Manufacturing Rolocast Stack Deodorizer Rolocast Area Deodorizer Fan System	
ES-08	Finishing Operations including E-coat coating process	
Facility-wide	Facility-wide Best Management Practices Negative Air Flow/ Negative Pressure Product Substitution Good Work Practices	

In addition to the changes outlined above, the facility has requested the following wording changes be made to match language used in Construction Permit 17-01C-626 as related to monitoring and recordkeeping requirements for control device CD-01a Afterburner (See Condition D-14):

- Operating Parameter should read:
  "Upper stack Gas Temperature ≥ 1300ºF (after process has stabilized following startup as allowed in 40 CFR 63.7690(b)(3))"
  Note: This facility is not subject to 40 CFR 63.7690(b)(3), but will track the upper stack temperature as outlined in the MACT requirement.
- Description should read:
  -"Pilot burner shall operate at all times except when no production is occurring."
  -"Afterburners shall operate from the time that melting begins until a temperature of 1300ºF is achieved and until upper stack temperature has stabilized."
  -"15-min average upper stack temperature shall remain at or above 1300ºF until melting has stopped."

This wording will be carried over from Permit 17-01C-626 and placed into the new Title V Permit.

APPLICATION NOTES

MCAPCO Regulation 2.0531- Sources in Nonattainment Areas - Avoidance Limit Change for ES-08 E-Coat process:

The facility currently has an avoidance limit for the E-Coat process under Emission Source ES-08. The coating material usage is limited to 189,000 gal/yr. This limit was based on VOC emission calculations for the one coating that was being used in 2011 when the original permit application was submitted for this process. The Construction Permit No. 12-01C-626 allocated 21.6 tpy of VOC emissions to this process in order to maintain the associated avoidance limit. The facility would like flexibility to use a different coating if the new product is more environmentally friendly while still providing a satisfactory product for their customers. Because a different product is likely to contain more or less VOC than the original product, the amount of coating material used could vary while producing the same amount of emissions and remaining under the effective limit. The avoidance limit will be changed from requiring product usage less than 189,000 gal/yr to stating that emissions from the process shall not exceed the emission limit of 21.6 tpy VOC. Charlotte pipe is required to notify MCAQ when new coatings are proposed and/or used, and verification of VOC content is required for emission calculations. Charlotte pipe will track and report emissions to ensure this limit is not exceeded.

SECTION C DETAILS

REGULATORY INFORMATION

(Identify the MCAPCO Regulations reviewed because of this application. At minimum, the regulations already listed should be reviewed and a reason given for applicability or non-applicability. If a Regulation has a standard, list the standard and indicate how the source is in compliance.)

MCAPCO REGULATION NUMBER/TITLE	EMISSION SOURCE ID No(s). SUBJECT	NOTES ON REGULATION (compliance demonstration, applicability, etc.)
1.5500 Title V Provisions 1.5236 Synthetic Minor Facilities	All	Charlotte Pipe is a major source under Title V because potential emissions of PM_{10}, CO, VOC, SO_2, NO_x, and HAP exceed the major source thresholds. The facility has accepted federally-enforceable limits on NO_x and HAP emissions to remain classified as a synthetic minor source for those pollutants.
1.5700 / 2.1100 Toxic Air Pollutant Procedures	ES-02, ES-03, ES-04, ES-05, ES-06, ES-08	There was no new toxics review triggered as a result of this permit renewal application. The facility has modeled for Acrolein, Ammonia, Benzene, Formaldehyde, Hydrogen cyanide, Hydrogen sulfide, and Phenol in the past and compliance was demonstrated. Following a stack test related to the replacement of the Herman molding machine with the new HWS machine (Title Permit No. 14-03V-626), the facility opted to submit a revised model for Benzene. The model results from this updated demonstration will be included in the new Title V Permit.
2.1110 NESHAP (40 CFR 61)	NA	None of the emission sources at the facility emit any HAP that is regulated under a Part 61 NESHAP.
2.0530 Prevention of Significant Deterioration	NA – Avoidance Limits in place	The facility has not been reviewed under PSD - BACT. The facility's Title V permit includes previously established emission limits for PSD and nonattainment area avoidance. The facility is currently in compliance with these limits. A new limit will be placed into the permit for the ES-08 E-Coat process as described above.
2.1111 NESHAP (40 CFR 63) (MACT)	FS-01, ES-01, ES-02, ES-03, ES-04, ES-05, ES-06, ES-07, ES-08 IA Emergency Generators ES-10	The facility is subject to several Area Source MACTs including: Subpart ZZZZZ – NESHAP for Iron and Steel Foundries. The facility is classified as a "large foundry" since metal melt production is > 20,000 tpy. The facility will only use scrap that has been cleaned of HAP. The facility conducts visual inspections of each scrap load and requires certificates from each vendor Subpart ZZZZ NESHAP for RICE engines. The two IA emergency generators are subject. The facility must operate these units in accordance with manufacturer specifications, install hour meters, and, perform regular maintenance. Subpart CCCCCC – NESHAP for Gasoline Dispensing Facilities. ES-10 is subject. The facility dispenses Less than 10,000 gallons per month. The facility is in compliance with these MACT regulations based on recently submitted reports and AQ inspections.
2.0524 New Source Performance Standards	NA	None of the emission sources are subject to any present NSPS.
2.0544 Prevention of Significant Deterioration for Greenhouse Gases	NA	A PSD review for GHG emissions was not triggered with this application. The facility is not subject to PSD (see above). Based on the June 23, 2014 U.S. Supreme Court

MCAPCO REGULATION NUMBER/TITLE	EMISSION SOURCE ID No(s). SUBJECT	NOTES ON REGULATION (compliance demonstration, applicability, etc.)
		ruling, GHG emissions alone cannot trigger a PSD review. Sources already subject to PSD for other pollutant(s) are required to review GHGs under PSD.
2.2600 Source Testing	ES-01, ES-3, ES-05, ES-06, ES-08	Stack testing was required as part of this permit application and as a result of Permit 18-03C-626 issuance. Test results indicated compliance with all associated permit conditions and limitations. No additional testing will be required at this time. The facility will test again when applying for the next Title V Permit renewal or as required following a permit modification.
2.2100 Risk Management Program 40 CFR 68: Accidental Release Planning, 112(r)	NA	Charlotte Pipe does not store any chemicals in quantities large enough to be subject to 112r. Charlotte Pipe is subject to the General Duties and as such must make efforts to prevent accidental spills and plan for contingencies.
40 CFR 82: Stratospheric Ozone Protection	IA	Only the small comfort cooling units for the small offices and control rooms are subject.
40 CFR 64 Compliance Assurance Monitoring	ES-01	ES-01 / CD-01 is subject to the requirements of 40 CFR 64 because that process has uncontrolled PM-10 emissions greater than 100 tons per year. There are no changes to the CAM requirements.
2.0512 - "Particulates from Wood Products Finishing Plants	ES-09	ES-9 is subject. The process has adequate duct work and is controlled by a dust collector.
2.0515 - "Particulates from Miscellaneous Industrial Processes.	FS-01, ES-01, ES-02, ES-03, ES-05, ES-06, ES-08	Particulate emissions do not exceed the allowable rate.
2.0516 - "Sulfur Dioxide Emissions from Combustion Sources	ES-01, IA Pipe Manufacturing and Finishing Combustion Sources, and IA Emergency Generators	The cupola has a control device to limit SO_2 emissions and with the use of low-sulfur coke and a production limit on an hourly basis, is not likely to exceed the allowable. Units burning natural gas will not exceed 2.3 lb/mmBtu SO_2.
2.0928 - "Gasoline Service Stations Stage I	ES-10	Required components are in place.
2.0967 – "Miscellaneous Metal and Plastic Parts Coatings"-	ES-08	ES-08 is subject to the standards and requirements of this regulation. MCAPCO 2.0967 requires that VOC emissions (before control) for the surface coating of metal parts and products shall not exceed 3.5 lbs/gal of coating for an extreme performance coating. During the review for permit 12-01C-626 the existing coatings were reviewed and found to be compliant with this requirement. Since that time, Charlotte Pipe has only considered one coating change. A notice was received on November 11, 2018 referencing a proposed new coating bath which was evaluated and shown to meet the 3.5 lb/gal requirement. Continued compliance is expected.
2.0958 - "Work Practices For Sources Of Volatile Organic Compounds	ES-08	The facility has put work practices into place for compliance.
1.5110 – Control and Prohibition of Odorous Emissions	All	The facility is subject to this regulation and has installed maximum feasible controls (MFC).
1.5113 – Determination of Maximum Feasible Controls for Odorous Emissions	All	The facility submitted a MFCTA document which followed the process outlined in this regulation for determining MFC for odorous emissions. Monitoring and reporting requirements were added to the Construction Permit 17-01C-626 and will be carried over to this new Title V Permit.

SECTION D DETAILS

EMISSION INFORMATION

CALCULATION METHOD CODES (List all that apply)	**1= Stack test result 2= Material (mass) balance 3= EPA approved information (AP-42, CTG, etc.) 4= Other (specify in Table below)**
CALCULATION REJECTION CODES (List all that apply)	**1= Calculation error 2= Wrong emission factor(s) used 3= Control efficiency(ies) not accepted 4= Other (Specify in Table below)**

EMISSION SOURCE ID NUMBER	CALCULATION METHOD CODE	ACCEPT OR REJECT?	CALCULATION REJECTION CODE	MCAQ CALCULATIONS ATTACHED?

There will be no change to emissions as a result of this Title V renewal application. Various emission changes made to the permit since the previous renewal permit was issued have already been incorporated. Emissions on the Summary page were obtained from the EPIC II database for CY2017.

Note on emissions from newer Construction Permits being incorporated now: There was a negligible decrease in particulate emissions associated with the issuance of Permit No. 18-03C-626. That decrease was not considered here. There were no emission changes related to the Odor Control Systems added in Permit No. 17-01C-626.

SECTION E

SUPPORTING DOCUMENTATION

(Provide brief description of any ATTACHMENTS)

1. Application dated May 25, 2018
2. Model Report dated December 3, 2018
3. Correspondence from Charlotte Pipe